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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,534	03/15/2001	Michael Charles Milner Cockrem	2027.601000	4508

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EXAMINER	
MANOHARAN, VIRGINIA	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/809,534	COCKREM ET AL.	
	Examiner	Art Unit	
	Virginia Manoharan	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-38 and 40-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite and/or incomplete for the same reasons as set forth at section B), page 2 of the previous Office action.

Claims 1-38 and 40-54 are objected to because of the following informalities: claims 1 and 54, for example, initially recite "distilling the feedstream by a method comprising the steps of", however, the claims recite a heating step. "Dstillation", by definition, is a combination of evaporation, vaporization or boiling and a condensation steps, but which are not recited e.g., in claim 1. Mere heating would read on evaporation, heat exchanging, pervaporization, etc., all unit of operations which are distinct form distillation.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-54 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-58 and 1-64 of copending application no. 09/809,243 and 809,649 respectively for the same reasons as set forth at the paragraph bridging pages 3 and 4 of the previous Office action.

Claims 1-54 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-58 and 1-64 of copending application no. 09/809,243 and 809,649 respectively. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as indicated at paragraph bridging pages 4-5 of the previous office action.

[The above rejections have not been fully addressed by applicants].

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-16, 18-32, 34, and 36-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benecke et al (5,319,107) with or without the Perry et al publication.

The above references are applied for the same combined reasons as set forth at pages 5-6 of the previous Office action.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benecke et al with or without the Perry et al publication as applied to claims 1-16, 18-32, 34, 36-54 above, and further in view of Baniel et al (5,510,526). Baniel is applied for the same reasons as set forth at page 6, second full paragraph of the previous Office action.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benecke et al with or without the Perry et al publication as applied to claims 1-16, 18-32 and 36-54 above, and further in view of WO 64850. WO '850 is applied for the same reasons as set forth at page 6, fourth full paragraph.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benecke et al with or without the Perry et al publication as applied to claims 1-16, 18-32, 34, 36-54 above, and further in view of Kulprathipanja et al (5,068,418).

Kulprathipanja is applied for the same reasons for as set forth at the first full paragraph of page 7 of the previous Office action.

Applicant's arguments filed June 9, 2004 have been fully considered but they are not persuasive.

A). Rejection under 35 USC 8 112:

While "one skilled in the art could easily ascertain when the composition of a mixture with respect to certain components is the same as the composition of a vapor stream produced by distillation of the mixture.." as argued, however, one would not know the pressure and composition defining the specific claimed azeotrope within the context of the claimed invention.

B). Under 35 USC 103 (a) rejection:

However, an artisan equally knows that co-distillation is synonymous with azeotropic distillation, with the azeotropes co-distilling in the overhead as opposed to co-distilling in the bottoms (as normally the case with extractive distillation).

The azeotropic and extractive distillations may be taken as belonging to the generic co-distillation type of distillation.

This is well-documented in the field of distillation. For examples only: Fowlkes (5,175,639), col.1, lines 26-28, teaches that "in the case of an organic in water azeotrope, one often may add a hydrocarbon as the codistillation agent to aid in the separation..."

Baker (4,191,616), discloses at col.1, lines 9-12, the purification of an alkane dicarboxylic acid comprising co-distillation of said acid with an alkylbenzene; further at col.4, lines 23-26 teaches an azeotrope of said acid and alkylbenzene.

Furthermore, none of Perry et al, Kulprathipanja et al, Baniel et al nor WO '850 was cited to teach azeotropes comprising a cyclic ester of a hydroxy organic acid and an azeotroping agent, as argued. Each of the above references was applied for reasons of record.

Benecke et al. ('107), e.g., and not Perry et al was cited to suggest the azeotropic distillation as in the claimed invention.

Thus, in the absence of anything which may be "new" or unexpected result", a prima facie case of obviousness has been established by the art and has not been rebutted.

Unexpected results must be established by factual evidence. Mere arguments or conclusory statements in the specification, applicants' amendments, or the brief do not suffice. In re Lindner, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972). In re Wood, 582, F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fowlkes and Baker discloses co-distillation producing azeotropes in their processes.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is (571) 272-1450. The examiner can normally be reached on Tuesday - Friday from 7:30a.m to 6:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manoharan/tgd

September 24, 2004

VIRGINIA MANOHARAN
PRIMARY EXAMINER
ART UNIT 1764